**TDMS No.** 20009 - 04 Test Type: CHRONIC Route: DOSED WATER Species/Strain: MICE/B6C3F1 P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

beta-Picoline **CAS Number:** 108-99-6

First Dose M/F: 11/09/04 / 11/08/04

Date Report Requested: 05/27/2011

Time Report Requested: 09:52:35

Lab: BAT

F2\_M3

C Number: C20009

Lock Date: 05/05/2008

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

Include ALL **Treatment Groups:** 

**Study Gender:** Both

**TDMSE Version:** 2.4.1.0\_004

**PWG Approval Date:** 12/14/2010

Test Type: CHRONIC
Route: DOSED WATER

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l
Disposition Summary				
Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	6	4	8	7
Natural Death	20	20	15	10
Survivors				
Terminal Sacrifice	24	26	27	33
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(36)	(33)	(39)	(42)
Degeneration, Hyaline		1 (3%)		
Inflammation, Chronic Active			1 (3%)	
Intestine Large, Cecum	(35)	(34)	(36)	(40)
Intestine Large, Colon	(40)	(40)	(41)	(40)
Intestine Large, Rectum	(39)	(38)	(42)	(41)
Intestine Small, Duodenum	(36)	(31)	(35)	(40)
Intestine Small, Ileum	(36)	(35)	(39)	(40)
Intestine Small, Jejunum	(35)	(32)	(37)	(40)
Diverticulum	1 (3%)	` ,	, ,	• •
Peyer's Patch, Hyperplasia, Lymphoid	` ,	1 (3%)		
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 (2%)	3 (6%)	2 (4%)	3 (6%)
Basophilic Focus	10 (20%)	12 (24%)	15 (30%)	7 (14%)
Clear Cell Focus	15 (30%)	19 (38%)	16 (32%)	9 (18%)
Congestion				1 (2%)
Cyst				1 (2%)
Eosinophilic Focus	18 (36%)	16 (32%)	19 (38%)	10 (20%)
Fatty Change		1 (2%)		
Hematopoietic Cell Proliferation	1 (2%)	·		
Inflammation, Chronic			2 (4%)	1 (2%)
Inflammation, Chronic Active				2 (4%)
Mineralization			1 (2%)	

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED WATER
Species/Strain: MICE/B6C3F1

**TDMS No.** 20009 - 04

TER CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

6C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Mixed Cell Focus	5 (10%)	4 (8%)	5 (10%)	4 (8%)	
Necrosis	5 (10%)	6 (12%)	6 (12%)	4 (8%)	
Mesentery	(7)	(1)	(1)	(1)	
Inflammation, Chronic Active	1 (14%)	(')	(1)	(1)	
Fat, Necrosis	5 (71%)		1 (100%)	1 (100%)	
Pancreas	(49)	(48)	(48)	(49)	
Atrophy	1 (2%)	(10)	(10)	(13)	
Necrosis	. (= /0)			1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)	
Stomach, Forestomach	(47)	(47)	(47)	(47)	
Hyperplasia, Squamous	2 (4%)	4 (9%)	3 (6%)	1 (2%)	
Ulcer	5 (11%)	3 (6%)	4 (9%)	1 (2%)	
Stomach, Glandular	(42)	(45)	(43)	(45)	
Mineralization	(/	2 (4%)	(10)	(13)	
Necrosis		_ ( . , 0 )	1 (2%)		
Ulcer	1 (2%)	2 (4%)	. (=70)		
Tooth	(35)	(41)	(42)	(41)	
Dysplasia	35 (100%)	41 (100%)	42 (100%)	41 (100%)	
CARDIOVASCULAR SYSTEM					
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy	12 (24%)	17 (34%)	7 (14%)	4 (8%)	
Inflammation, Suppurative	2 (4%)	17 (3470)	7 (1470)	4 (6 %)	
Mineralization	1 (2%)	1 (2%)	1 (2%)	1 (2%)	
Necrosis	1 (2/0)	1 (2%)	1 (2%)	1 (270)	
Thrombosis	2 (4%)	2 (4%)	1 (2%)		
Artery, Inflammation, Chronic Active	2 (470)	2 (470)	1 (2%)	2 (4%)	
Artery, Illiamination, Chronic Active			1 (270)	2 (470)	
NDOCRINE SYSTEM					
Adrenal Cortex	(49)	(48)	(50)	(48)	
Atrophy		1 (2%)			
	10 (20%)	8 (17%)	10 (20%)	5 (10%)	
Hyperplasia					

Test Type: CHRONIC
Route: DOSED WATER

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline CAS Number: 108-99-6 Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

Lab: BAT

86C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Subcapsular, Hyperplasia		1 (2%)			
Adrenal Medulla	(49)	(47)	(50)	(48)	
Hyperplasia	1 (2%)	1 (2%)	1 (2%)		
Islets, Pancreatic	(49)	(48)	(48)	(49)	
Hyperplasia		1 (2%)	2 (4%)		
Parathyroid Gland	(37)	(39)	(44)	(31)	
Pituitary Gland	(47)	(49)	(49)	(49)	
Thrombosis	1 (2%)				
Pars Distalis, Hyperplasia	1 (2%)		2 (4%)		
Thyroid Gland	(49)	(50)	(49)	(49)	

#### **GENERAL BODY SYSTEM**

None

GENITAL SYSTEM				
Coagulating Gland	(2)	(0)	(0)	(0)
Inflammation, Suppurative	1 (50%)			
Epididymis	(50)	(50)	(50)	(49)
Granuloma Sperm		1 (2%)		2 (4%)
Mineralization				1 (2%)
Preputial Gland	(50)	(50)	(50)	(50)
Cyst				1 (2%)
Inflammation, Chronic Active	3 (6%)	3 (6%)	4 (8%)	1 (2%)
Prostate	(50)	(50)	(48)	(50)
Hyperplasia		1 (2%)		
Inflammation, Suppurative	4 (8%)		2 (4%)	1 (2%)
Inflammation, Chronic Active			1 (2%)	
Seminal Vesicle	(47)	(48)	(49)	(47)
Amyloid Deposition			2 (4%)	1 (2%)
Inflammation, Suppurative	1 (2%)			
Inflammation, Chronic Active		1 (2%)	3 (6%)	2 (4%)
Testes	(50)	(50)	(50)	(50)
Atrophy	1 (2%)	2 (4%)	2 (4%)	

a - Number of animals examined microscopically at site and number of animals with lesion

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

Lab: BAT

B6C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Mineralization Interstitial Cell, Hyperplasia		1 (2%)	1 (2%)	1 (2%)	
HEMATOPOIETIC SYSTEM		,			
Bone Marrow	(50)	(50)	(48)	(50)	
Angiectasis			1 (2%)		
Lymph Node	(2)	(1)	(0)	(2)	
Renal, Hyperplasia, Lymphoid	1 (50%)	. ,	. ,		
Lymph Node, Mandibular	(50)	(49)	(49)	(50)	
Infiltration Cellular, Plasma Cell	,	` '	1 (2%)	,	
Lymph Node, Mesenteric	(45)	(45)	(43)	(45)	
Hyperplasia, Lymphoid	( - /	( - /	( - /	1 (2%)	
Inflammation, Chronic			1 (2%)	( ( )	
Spleen	(46)	(48)	(47)	(46)	
Hematopoietic Cell Proliferation	1 (2%)	1 (2%)	( )	( - /	
Hyperplasia, Lymphoid	2 (4%)	(= / • /			
Thymus	(41)	(42)	(48)	(47)	
INTEGUMENTARY SYSTEM					
Skin	(50)	(50)	(50)	(50)	
Cyst Epithelial Inclusion	1 (2%)	(30)	(50)	(50)	
Inflammation, Chronic Active	2 (4%)	1 (2%)			
milanimation, officiale Active	2 (470)	1 (270)			
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	
Skeletal Muscle	(1)	(0)	(0)	(0)	
			(0)		
NERVOUS SYSTEM					
Brain	(50)	(50)	(50)	(50)	
		• •			

a - Number of animals examined microscopically at site and number of animals with lesion

**TDMS No.** 20009 - 04

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: MICE/B6C3F1

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

Lab: BAT

B6C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Hemorrhage		1 (2%)			
Glial Cell, Pigmentation	1 (2%)				
RESPIRATORY SYSTEM					
Lung	(50)	(50)	(50)	(50)	
Hemorrhage	2 (4%)	1 (2%)			
Inflammation, Suppurative		1 (2%)			
Inflammation, Granulomatous	1 (2%)	1 (2%)			
Thrombosis			1 (2%)	2 (4%)	
Alveolar Epithelium, Hyperplasia	4 (8%)	6 (12%)	6 (12%)	7 (14%)	
Alveolus, Infiltration Cellular, Histiocyte	2 (4%)	1 (2%)	3 (6%)	2 (4%)	
Bronchiole, Hyperplasia	1 (2%)		1 (2%)		
Nose	(50)	(50)	(50)	(50)	
Inflammation, Suppurative	4 (8%)	9 (18%)	9 (18%)	6 (12%)	
Olfactory Epithelium, Atrophy	3 (6%)	4 (8%)	8 (16%)	7 (14%)	
Olfactory Epithelium, Metaplasia, Respiratory	8 (16%)	12 (24%)	30 (60%)	41 (82%)	
Respiratory Epithelium, Hyperplasia	18 (36%)	23 (46%)	23 (46%)	17 (34%)	
Pleura	(0)	(1)	(0)	(1)	
Trachea	(47)	(49)	(45)	(49)	
SPECIAL SENSES SYSTEM					
Eye	(36)	(39)	(43)	(40)	
Degeneration	1 (3%)	1 (3%)	1 (2%)	1 (3%)	
Inflammation, Suppurative				1 (3%)	
Cornea, Inflammation, Chronic Active			1 (2%)	,	
Retina, Hemorrhage, Chronic	1 (3%)		1 (2%)		
Harderian Gland	(46)	(47)	(46)	(47)	
Hyperplasia	1 (2%)	1 (2%)	. ,	4 (9%)	
Inflammation, Chronic	, ,	, ,	1 (2%)	, ,	

### **URINARY SYSTEM**

**TDMS No.** 20009 - 04

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: MICE/B6C3F1

a - Number of animals examined microscopically at site and number of animals with lesion

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

Lab: BAT

B6C3F1 MICE MALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l
Kidney	(50)	(50)	(50)	(49)
Amyloid Deposition	()	()	1 (2%)	( - /
Cyst	1 (2%)		,	
Hydronephrosis	1 (2%)	2 (4%)	1 (2%)	2 (4%)
Infarct	,	1 (2%)	1 (2%)	, ,
Inflammation, Suppurative	2 (4%)	, ,	, ,	1 (2%)
Metaplasia, Osseous	4 (8%)	4 (8%)	1 (2%)	4 (8%)
Mineralization	3 (6%)	2 (4%)	2 (4%)	1 (2%)
Nephropathy	43 (86%)	49 (98%)	49 (98%)	49 (100%)
Thrombosis	1 (2%)			
Artery, Inflammation, Chronic Active		1 (2%)	1 (2%)	
Papilla, Necrosis	2 (4%)		1 (2%)	2 (4%)
Renal Tubule, Hyperplasia			1 (2%)	
Renal Tubule, Hypertrophy		1 (2%)		
Renal Tubule, Pigmentation	1 (2%)			1 (2%)
Urethra	(3)	(3)	(5)	(3)
Inflammation, Suppurative	1 (33%)	3 (100%)	3 (60%)	1 (33%)
Urinary Bladder	(45)	(45)	(45)	(46)
Hemorrhage	1 (2%)	1 (2%)		
Inflammation, Suppurative	1 (2%)			
Inflammation, Chronic			1 (2%)	

<sup>\*\*\*</sup> END OF MALE \*\*\*

**TDMS No.** 20009 - 04

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: MICE/B6C3F1

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED WATER

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Disposition Summary					
Animals Initially In Study	50	50	50	50	
Early Deaths					
Moribund Sacrifice	4	3	1	4	
Natural Death	8	15	14	13	
Survivors					
Natural Death			1		
Terminal Sacrifice	38	32	34	33	
Animals Examined Microscopically	50	50	50	50	
ALIMENTARY SYSTEM					
Esophagus	(50)	(49)	(49)	(50)	
Gallbladder	(43)	(36)	(36)	(35)	
Degeneration, Hyaline			1 (3%)	1 (3%)	
Intestine Large, Cecum	(44)	(36)	(38)	(39)	
Intestine Large, Colon	(44)	(35)	(40)	(38)	
Intestine Large, Rectum	(43)	(35)	(37)	(38)	
Intestine Small, Duodenum	(42)	(35)	(36)	(37)	
Lymphangiectasis			1 (3%)		
Intestine Small, Ileum	(44)	(36)	(37)	(37)	
Inflammation, Acute			1 (3%)		
Intestine Small, Jejunum	(43)	(35)	(37)	(38)	
Inflammation, Granulomatous		1 (3%)			
Inflammation, Acute			1 (3%)		
Liver	(49)	(50)	(50)	(50)	
Angiectasis	3 (6%)	3 (6%)	6 (12%)	5 (10%)	
Basophilic Focus	4 (8%)	2 (4%)	1 (2%)	6 (12%)	
Clear Cell Focus	3 (6%)	2 (4%)	6 (12%)		
Congestion				1 (2%)	
Eosinophilic Focus	11 (22%)	10 (20%)	14 (28%)	15 (30%)	
Fatty Change		4 (8%)	1 (2%)	2 (4%)	
Hematopoietic Cell Proliferation		1 (2%)			
Mixed Cell Focus				2 (4%)	
Necrosis	4 (8%)	2 (4%)	3 (6%)	2 (4%)	

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED WATER
Species/Strain: MICE/R6C

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Tension Lipidosis	1 (2%)	1 (2%)		2 (4%)	
Thrombosis	,	1 (2%)		,	
Mesentery	(8)	(16)	(16)	(9)	
Fat, Hemorrhage	( )	1 (6%)	,	. ,	
Fat, Necrosis	7 (88%)	14 (88%)	13 (81%)	8 (89%)	
Pancreas	(48)	(42)	(46)	(45)	
Atrophy	2 (4%)	,	2 (4%)	1 (2%)	
Thrombosis	,	1 (2%)	(	,	
Duct, Cyst	1 (2%)	1 (2%)			
Salivary Glands	(50)	(47)	(47)	(50)	
Inflammation, Chronic	()	(,	(,	1 (2%)	
Necrosis	1 (2%)			. (= /3)	
Stomach, Forestomach	(47)	(43)	(45)	(47)	
Hyperplasia, Squamous	( /	1 (2%)	3 (7%)	3 (6%)	
Ulcer		1 (2%)	1 (2%)	3 (373)	
Stomach, Glandular	(45)	(39)	(41)	(41)	
Dysplasia	(10)	(00)	1 (2%)	( )	
Hyperplasia		1 (3%)	1 (270)		
Mineralization	2 (4%)	2 (5%)	1 (2%)		
Tongue	(0)	(0)	(0)	(1)	
Tooth	(0)	(1)	(2)	(9)	
Dysplasia	(0)	(1)	2 (100%)	9 (100%)	
Буэргазга			2 (10070)	3 (10070)	
CARDIOVASCULAR SYSTEM					
Blood Vessel	(2)	(3)	(1)	(0)	
Mineralization	2 (100%)	3 (100%)	1 (100%)		
Heart	(50)	(50)	(49)	(50)	
Cardiomyopathy	4 (8%)	1 (2%)	7 (14%)	3 (6%)	
Inflammation, Suppurative	1 (2%)	1 (2%)	,	1 (2%)	
Mineralization	1 (2%)	4 (8%)	1 (2%)	,	
Necrosis	(/	1 (2%)	(/		
Thrombosis	2 (4%)	1 (2%)			
Artery, Inflammation, Chronic Active	( /	()		1 (2%)	
Capillary, Hyperplasia		1 (2%)		- (-,-)	

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED WATER

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
ENDOCRINE SYSTEM					
Adrenal Cortex	(49)	(45)	(46)	(50)	
Hyperplasia	2 (4%)			1 (2%)	
Hypertrophy	1 (2%)	1 (2%)		1 (2%)	
Vacuolization Cytoplasmic			1 (2%)		
Adrenal Medulla	(49)	(45)	(46)	(50)	
Hyperplasia		1 (2%)			
Islets, Pancreatic	(48)	(41)	(45)	(45)	
Hyperplasia			1 (2%)	1 (2%)	
Parathyroid Gland	(38)	(34)	(40)	(41)	
Hyperplasia			2 (5%)		
Pituitary Gland	(50)	(46)	(47)	(46)	
Pars Distalis, Angiectasis	3 (6%)	1 (2%)		1 (2%)	
Pars Distalis, Hyperplasia	8 (16%)	14 (30%)	13 (28%)	7 (15%)	
Thyroid Gland	(48)	(45)	(45)	(49)	
Cyst				2 (4%)	
Follicular Cell, Hyperplasia	1 (2%)			1 (2%)	
Follicular Cell, Hypertrophy			1 (2%)		
GENERAL BODY SYSTEM					
None					
GENITAL SYSTEM					
Clitoral Gland	(50)	(50)	(48)	(50)	
Ovary	(49)	(48)	(48)	(47)	
Cyst	5 (10%)	5 (10%)	5 (10%)	4 (9%)	
Thrombosis	J (1070)	3 (1070)	2 (4%)	4 (9%)	
Uterus	(49)	(47)	(49)	(49)	
Angiectasis	(10)	1 (2%)	(10)	(10)	
Inflammation, Acute		. (=,0)		2 (4%)	

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC
Route: DOSED WATER

**TDMS No.** 20009 - 04

Species/Strain: MICE/B6C3F1

beta-Picoline
CAS Number: 108-99-6

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
Necrosis				1 (2%)	
Thrombosis	1 (2%)		1 (2%)	1 (270)	
Endometrium, Hyperplasia, Cystic	33 (67%)	29 (62%)	33 (67%)	37 (76%)	
HEMATOPOIETIC SYSTEM					
Bone Marrow	(49)	(46)	(48)	(49)	
Angiectasis	, ,	, ,	, ,	1 (2%)	
Lymph Node	(6)	(8)	(6)	(8)	
Lumbar, Angiectasis	1 (17%)				
Lumbar, Hemorrhage			1 (17%)		
Mediastinal, Hyperplasia, Lymphoid	1 (17%)	1 (13%)			
Pancreatic, Ectasia	1 (17%)				
Renal, Ectasia	1 (17%)	1 (13%)	1 (17%)		
Lymph Node, Mandibular	(48)	(42)	(47)	(47)	
Hyperplasia, Lymphoid			1 (2%)		
Lymph Node, Mesenteric	(46)	(38)	(45)	(46)	
Angiectasis				1 (2%)	
Hemorrhage			1 (2%)	1 (2%)	
Spleen	(46)	(42)	(45)	(46)	
Hematopoietic Cell Proliferation	4 (9%)	3 (7%)	5 (11%)	1 (2%)	
Hyperplasia, Lymphoid				1 (2%)	
Thrombosis		1 (2%)			
Thymus	(45)	(44)	(48)	(47)	
Amyloid Deposition			1 (2%)		
Hyperplasia, Lymphoid			1 (2%)	1 (2%)	
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(49)	(49)	(48)	
Hyperplasia	1 (2%)	(10)	(10)	(10)	
Skin	(50)	(50)	(50)	(50)	
Hyperplasia, Squamous	(00)	1 (2%)	(30)	(55)	
Inflammation, Acute		. (270)	1 (2%)		
Inflammation, Chronic Active		2 (4%)	. (= /0)		

**CAS Number:** 108-99-6

**TDMS No.** 20009 - 04

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: MICE/B6C3F1

Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	
Hyperostosis				1 (2%)	
Skeletal Muscle	(1)	(0)	(0)	(1)	
NERVOUS SYSTEM					
Brain	(50)	(47)	(47)	(50)	
Hemorrhage		1 (2%)		1 (2%)	
Necrosis		1 (2%)			
Peripheral Nerve	(1)	(0)	(0)	(1)	
Spinal Cord	(1)	(0)	(0)	(1)	
RESPIRATORY SYSTEM					
Lung	(50)	(50)	(49)	(50)	
Hemorrhage				1 (2%)	
Inflammation, Acute			1 (2%)		
Inflammation, Chronic Active		1 (2%)			
Mineralization	1 (2%)	3 (6%)	2 (4%)		
Alveolar Epithelium, Hyperplasia	2 (4%)	4 (8%)	3 (6%)	8 (16%)	
Alveolus, Infiltration Cellular, Histiocyte	2 (4%)	1 (2%)	1 (2%)		
Bronchiole, Hyperplasia			3 (6%)	1 (2%)	
Nose	(49)	(44)	(49)	(47)	
Inflammation, Suppurative	1 (2%)			1 (2%)	
Olfactory Epithelium, Atrophy	1 (2%)	2 (5%)	2 (4%)	7 (15%)	
Olfactory Epithelium, Metaplasia, Respiratory	2 (4%)	2 (5%)	7 (14%)	14 (30%)	
Respiratory Epithelium, Hyperplasia	7 (14%)	2 (5%)	6 (12%)	13 (28%)	
Pleura	(0)	(0)	(0)	(1)	
Trachea	(47)	(41)	(45)	(44)	
Mineralization	1 (2%)	1 (2%)			

a - Number of animals examined microscopically at site and number of animals with lesion

beta-Picoline CAS Number: 108-99-6 Date Report Requested: 05/27/2011 Time Report Requested: 09:52:35 First Dose M/F: 11/09/04 / 11/08/04

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/l	312.5 mg/l	625 mg/l	1250 mg/l	
SPECIAL SENSES SYSTEM					
Eye	(43)	(35)	(36)	(39)	
Cataract	1 (2%)				
Degeneration	1 (2%)		1 (3%)	1 (3%)	
Cornea, Inflammation, Acute	1 (2%)	1 (3%)			
Cornea, Inflammation, Chronic Active				1 (3%)	
Harderian Gland	(45)	(41)	(43)	(47)	
Hyperplasia	5 (11%)	2 (5%)	1 (2%)	1 (2%)	
Inflammation, Chronic			1 (2%)		
Zymbal's Gland	(0)	(0)	(0)	(1)	
URINARY SYSTEM					
Kidney	(49)	(47)	(48)	(49)	
Amyloid Deposition	1 (2%)	1 (2%)	1 (2%)	. ,	
Hydronephrosis		1 (2%)			
Inflammation, Suppurative	1 (2%)			1 (2%)	
Metaplasia, Osseous		1 (2%)	1 (2%)		
Mineralization	3 (6%)	2 (4%)	1 (2%)	2 (4%)	
Nephropathy	29 (59%)	16 (34%)	25 (52%)	30 (61%)	
Renal Tubule, Necrosis	2 (4%)	3 (6%)	1 (2%)	2 (4%)	
Urinary Bladder	(44)	(37)	(39)	(41)	
Inflammation, Chronic				1 (2%)	

<sup>\*\*\*</sup> END OF REPORT \*\*\*

**TDMS No.** 20009 - 04

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: MICE/B6C3F1

a - Number of animals examined microscopically at site and number of animals with lesion